REMARKS

This Amendment is in response to the Office Action dated April 4, 2008 ("OA"). In the Office Action, claims 1-27 were rejected under 35 U.S.C. §§ 101 103. By this Amendment, claims 1, 6, 10, 16, 17 and 21 are amended. Currently pending claims 1-27 are believed allowable, with claims 1, 6, 11, 16, 17, 21 and 24 being independent claims.

CLAIM REJECTIONS UNDER 35 USC §101:

Claims 1-27 were rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter.

Claim 1

Claim 1 recites method for generating speech recognition models based on speech spoken from a plurality of female and male speakers. Specifically, claim 1 is amended to recite, "converting speech spoken from a plurality of female speakers into a first set of recorded phonemes training data; converting speech spoken from a plurality of male speakers into a second set of recorded phonemes training data." Support for this amendment can be found at least at page 3, line 28 through page 4, line 1 and Figure 1.

The Office Action argues, "With respect to claims 1, 6, 17, and 17 the methods and systems claimed consist solely of mathematical operations without some practical application." The Applicants respectfully disagree with this statement. OA, pp. 3. As discussed in the specification, "The model creation system 102 of the present invention beneficially reduces the amount of acoustic models needed to be stored and searched during speech recognition. Furthermore, a speech recognition system using the female, male and gender independent models 110,

112, and 114 described above requires less computing power, uses less system resources, and is more practical to implement with minimal loss in recognition accuracy." Application, pp. 5, ll. 7-13.

The Office Action further argues "Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process." OA, pp. 3. The Applicants submit claim 1 currently recites a method for generating speech recognition models based on speech spoken from a plurality of female and male speakers. Thus, this argument is moot.

For at least these reasons, claim 1 is directed to statutory subject matter. Claims 2-5 are dependent on and further limit claim 1. Since claim 1 is directed to statutory subject matter, claims 2-5 are also believed directed to statutory subject matter.

Claim 6

Claim 6 is amended to recite a system for generating speech recognition models comprising a computer processor. Support for this amendment can be found at least at page 4, lines 6-15 and Fig. 1, item 108. Applicants submit claim 6 is not directed solely to mathematical operations since a computer processor is a tangible device. Furthermore, as mentioned above for claim 1, the claimed invention is directed to practical application. Thus, claim 6 is directed to statutory subject matter. Claims 7-10 are dependent on and further limit claim 6. Since claim 6 is directed to statutory subject matter, claims 7-10 are also believed directed to statutory subject matter.

Claim 11

In rejecting claim 11, the Examiner argues, "With respect to claims 11 and 24, applicant claims a "computer program product" (emphasis added). There is no description or definition found in applicant's disclosure regarding the computer program product. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture or a composition of matter." OA, pp. 3-4. The Applicants respectfully disagree.

The specification states, "It should be remarked that the logical operations shown may be implemented (1) as a sequence of computer executed steps running on a computing system . . . ." Application, pp. 7, ll. 15-17. Thus, the application does contain a description of a computer program product. Moreover, those skilled in the art would understand what the term computer program product means. For example, a search of the USPTO's database reveals 26,134 issued patents to date specifically using the phrase "computer program product."

Furthermore, "When a computer program is recited in conjunction with a physical structure, such as a computer memory, USPTO personnel should treat the claim as a product claim." Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, pp. 53-54 (Oct. 26, 2005) (http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf). Thus, according the USPTO's guidelines, claim 11 should be treated as a product claim since it recites a computer program product embodied in computer memory.

For at least these reasons, claim 11 is directed to statutory subject matter. Claims 12-15 are dependent on and further limit claim 11. Since claim 11 is directed to statutory subject matter, claims 12-15 are also believed directed to statutory subject matter.

Claim 16

Claim 16 is amended to recite a system for generating speech recognition models comprising a computer processor. Support for this amendment can be found at least at page 4, lines 6-15 and Fig. 1, item 108. Applicants submit claim 16 is not directed solely to mathematical operations since a computer processor is a tangible device. Furthermore, as mentioned above for claim 1, the claimed invention is directed to practical application. Thus, claim 16 is directed to statutory subject matter. Claims 17-20 are dependent on and further limit claim 16. Since claim 16 is directed to statutory subject matter, claims 17-20 are also believed directed to statutory subject matter.

Claim 17

Claim 17 recites method for recognizing speech from an audio stream originating from one of a plurality of data classes. Specifically, claim 1 is amended to recite, "converting the speech into the audio stream." Support for this amendment can be found at least at page 3, line 28 through page 4, line 1 and Figure 1.

The Office Action argues, "With respect to claims 1, 6, 17, and 17 the methods and systems claimed consist solely of mathematical operations without some practical application." The Applicants respectfully disagree with this statement. OA, pp. 3. As discussed in the specification, "The model creation

system 102 of the present invention beneficially reduces the amount of acoustic models needed to be stored and searched during speech recognition. Furthermore, a speech recognition system using the female, male and gender independent models 110, 112, and 114 described above requires less computing power, uses less system resources, and is more practical to implement with minimal loss in recognition accuracy." Application, pp. 5, ll. 7-13.

The Office Action further argues "Thus, a process consisting solely of mathematical operations, i.e., converting one set of numbers into another set of numbers, does not manipulate appropriate subject matter and thus cannot constitute a statutory process." OA, pp. 3. The Applicants submit claim 1 currently recites converting the speech into the audio stream. Thus, this argument is moot.

For at least these reasons, claim 17 is directed to statutory subject matter. Claims 18-20 are dependent on and further limit claim 17. Since claim 17 is directed to statutory subject matter, claims 18-20 are also believed directed to statutory subject matter.

Claim 21

Claim 21 is amended to recite a system for recognizing speech data from an audio stream originating from one of a plurality of data classes comprising a computer processor. Support for this amendment can be found at least at page 4, lines 6-15 and Fig. 1, item 108. Applicants submit claim 21 is not directed solely to mathematical operations since a computer processor is a tangible device. Furthermore, as mentioned above for claim 1, the claimed invention is directed to practical application. Thus, claim 21 is directed to statutory subject

matter. Claims 22 and 23 are dependent on and further limit claim 21. Since claim 21 is directed to statutory subject matter, claims 22 and 23 are also believed directed to statutory subject matter.

Claim 24

In rejecting claim 24, the Examiner argues, "With respect to claims 11 and 24, applicant claims a "computer program product" (emphasis added). There is no description or definition found in applicant's disclosure regarding the computer program product. This subject matter is not limited to that which falls within a statutory category of invention because it is not limited to a process, machine, manufacture or a composition of matter." OA, pp. 3-4. The Applicants respectfully disagree.

The specification states, "It should be remarked that the logical operations shown may be implemented (1) as a sequence of computer executed steps running on a computing system . . . ." Application, pp. 7, ll. 15-17. Thus, the application does contain a description of a computer program product. Moreover, those skilled in the art would understand what the term computer program product means. For example, a search of the USPTO's database reveals 26,134 issued patents to date specifically using the phrase "computer program product."

Furthermore, "When a computer program is recited in conjunction with a physical structure, such as a computer memory, USPTO personnel should treat the claim as a product claim." Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, pp. 53-54 (Oct. 26, 2005) (http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf). Thus, according the USPTO's

guidelines, claim 24 should be treated as a product claim since it recites a computer program product embodied in computer memory.

For at least these reasons, claim 24 is directed to statutory subject matter. Claims 25-27 are dependent on and further limit claim 11. Since claim 24 is directed to statutory subject matter, claims 25-27 are also believed directed to statutory subject matter.

CLAIM REJECTIONS UNDER 35 USC §103:

Claims 6, 11 and 16 are rejected as obvious under 35 U.S.C. §103 over U.S. Patent No. 6,567,776 issued to Chang et al. ("Chang") in view of U.S. Patent No. 6,578,032 issued to Chandrasekar et al. ("Chandrasekar").

Claim 1 is rejected as obvious under 35 U.S.C. §103 over Chang in view of Chandrasekar and U.S. Patent No. 6,151,575 issued to Newman et al. ("Newman").

Claims 2-4 are rejected as obvious over Chang, Chandrasekar, Newman, and U.S. Patent No. 6,529,902 issued to Kanevsky et al. ("Kanevsky").

Claims 7-9 and 12-14 are rejected as obvious over Chang, Chandrasekar, Newman, and Kanevsky.

Claim 5 is rejected as obvious over Chang, Chandrasekar, Newman and U.S. Patent Publication No. 2003/0231775 to Wark ("Wark").

Claims 10 and 15 are rejected as obvious over Chang, Chandrasekar, and Wark.

Claims 17, 18, 21, 22, 24 and 25 are rejected as obvious over Wark in view of U.S. Patent Publication No. 2002/0174086 to Verma et al. ("Verma"), Chang, Chandrasekar, and Newman.

Claims 20 and 27 stand rejected as obvious over Wark in view of Verma, Chang, Chandrasekar, Newman and U.S. Patent Publication No. 2005/0251390 to Catchpole ("Catchpole").

Claims 19, 23 and 26 are rejected as obvious over Wark in view of Verma, Chang, Chandrasekar, Newman and Elsner et al. "Bayesian analysis of U.S. hurricane" ("Elsner").

A *prima facie* case for obviousness can only be made if the combined reference documents teach or suggest all the claim limitations. MPEP 2143. Furthermore, to establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference or to combine reference teachings. MPEP 2143.

Claim 1

Claim 1 recites, in part, "determining a difference in model information between the first speech recognition model and the second speech recognition model." As correctly pointed out by the Examiner, Chang does not disclose this claim element. OA, pp. 8. Furthermore, Newman does not provide such teaching. OA, pp. 7-9. Nevertheless, the Office Action cites Chandrasekar as teaching this claim element. The Applicants respectfully disagree with this conclusion.

Chandrasekar is specifically cited at column 10, lines 59-61 and 65-66 as teaching "determining a difference in model information between the first speech recognition model and the second speech recognition model." The cited passage states:

> Also, it should be appreciated that the invention may be used to amalgamate existing clusters. For example, it may

> be that as more members are added to Cluster A 306 and Cluster C 308 their differences become insignificant. Alternatively, it may be that Cluster A 306 was generated using the invention, but Cluster C 308 was created by some other method (e.g., manually) and blindly inputted to editorial database 210. As a result, Cluster C 308 may be merged with Cluster A 306. Chandrasekar, col. 10, ll. 59-66.

The Applicants respectfully submit there is no discussion or suggestion in the cited passage of determining a difference in model information between the first speech recognition model and the second speech recognition model. Chandrasekar relates to the field of text classification and has nothing to do with determining the difference between the first speech recognition model and the second speech recognition model.

Furthermore, the Office Action posits one of ordinary skill in the art would "have used the features of determining a difference between models and creating an independent model as taught by Chandrasekar et al. for Chang et al.'s method and computer program product because Chandrasekar et al.'s invention automatically analyzes a text string and either updates an existing cluster or creates a new cluster (Col. 2, lines 2-4)." OA, pp. 8. In this regard, Chang express no appreciation of analyzing a text string. In this light, it is apparent that the reason for combining Chang and Chandrasekar in the manner advanced by the Examiner stems from hindsight knowledge impermissibly derived from the Applicant's disclosure.

Claim 1 further recites, in part, "creating a gender-independent speech recognition model based on the first set of recorded phonemes training data and the second set of recorded phonemes training data if the difference in model information is insignificant." Again, the Office Action offers only the

passages at column 10, lines 59-61 and 65-66 of Chandrasekar as teaching this claim element.

The Applicants respectfully submit there is no discussion or suggestion in the cited passage of creating a gender-independent speech recognition model based on the first set of recorded phonemes training data and the second set of recorded phonemes training data if the difference in model information is insignificant. Chandrasekar relates to the field of text classification and has nothing to do with creating a gender-independent speech recognition model.

For at least these reasons, claim 1 is believed allowable over the cited art. The Applicants respectfully request reconsideration and allowance of claim 1.

Claims 2-5

Claims 2-5 and further limit claim 1. Since claim 1 is believed allowable over the cited documents, claims 2-5 are also believed allowable for at least the same reasons as claim 1.

Claim 6

Claim 6 recites, in part, "a processing module configured to create an independent speech recognition model based on the first set of training data and the second set of training data if the difference in model information between first speech recognition model and the second speech recognition model is insignificant." As correctly pointed out by the Examiner, Chang does not disclose this claim element. OA, pp. 5. Nevertheless, the Office Action cites Chandrasekar as teaching this claim element. The Applicants respectfully disagree with this conclusion.

Chandrasekar is specifically cited at column 10, lines 59-61 and 65-66 as teaching "a processing module configured to

create an independent speech recognition model based on the first set of training data and the second set of training data if the difference in model information between first speech recognition model and the second speech recognition model is insignificant." The cited passage states:

> Also, it should be appreciated that the invention may be used to amalgamate existing clusters. For example, it may be that as more members are added to Cluster A 306 and Cluster C 308 their differences become insignificant. Alternatively, it may be that Cluster A 306 was generated using the invention, but Cluster C 308 was created by some other method (e.g., manually) and blindly inputted to editorial database 210. As a result, Cluster C 308 may be merged with Cluster A 306. Chandrasekar, col. 10, ll. 59-66.

The Applicants respectfully submit there is no discussion or suggestion in the cited passage of a processing module configured to create an independent speech recognition model based on the first set of training data and the second set of training data if the difference in model information between first speech recognition model and the second speech recognition model is insignificant. Chandrasekar relates to the field of text classification and has nothing to do with creating an independent speech recognition model.

Furthermore, the Office Action posits one of ordinary skill in the art would "have used the features of determining a difference between models and creating an independent model as taught by Chandrasekar et al. for Chang et al.'s method and computer program product because Chandrasekar et al.'s invention automatically analyzes a text string and either updates an existing cluster or creates a new cluster (Col. 2, lines 2-4)." OA, pp. 8. In this regard, Chang express no appreciation of analyzing a text string. In this light, it is

apparent that the reason for combining Chang and Chandrasekar in the manner advanced by the Examiner stems from hindsight knowledge impermissibly derived from the Applicant's disclosure.

For at least these reasons, claim 6 is believed allowable over the cited art. The Applicants respectfully request reconsideration and allowance of claim 6.

Claims 7-10

Claims 7-10 and further limit claim 6. Since claim 6 is believed allowable over the cited documents, claims 7-10 are also believed allowable for at least the same reasons as claim 6.

Claims 11 and 16

Claims 11 and 16 were rejected for the same reasons as claim 6. Thus, claims 11 and 16 are believed allowable for at least the same reasons as claim 6, as discussed above.

Claims 12-15

Claims 12-15 and further limit claim 11. Since claim 11 is believed allowable over the cited documents, claims 12-15 are also believed allowable for at least the same reasons as claim 11.

Claim 17

Claim 17 recites, in part, "wherein the plurality of data classes include a female speech recognition model based on recorded phonemes originating from plurality of female speakers, a male speech recognition model based on recorded phonemes originating from plurality of male speakers, and a gender-independent speech recognition model based on recorded phonemes originating from plurality of both female and male speakers having insignificant differences in information." The Examiner

argues Chang, in view of Chandrasekar and Newman teach this claim element, referring to the rejection of claim 1. OA, pp. 17.

As discussed above, the cited references do not teach or suggest all the claim elements of claim 1. Since no other information is present in the Office Action regarding claim 17, the Applicants submit claim 17 is allowable for at least the same reasons as claim 1.

Claims 18-20

Claims 18-20 further limit claim 17. Since claim 17 is believed allowable over the cited documents, claims 18-20 are also believed allowable for at least the same reasons as claim 17.

Claims 21 and 24

Claims 21 and 24 were rejected for the same reasons as claim 17. Thus, claims 21 and 24 are believed allowable for at least the same reasons as claim 17, as discussed above.

Claims 22 and 23

Claim 22 and 23 further limits claim 21. Since claim 21 is believed allowable over the cited documents, claims 22 and 23 are also believed allowable for at least the same reasons as claim 21.

Claims 25-27

Claims 25-27 further limit claim 24. Since claim 24 is believed allowable over the cited documents, claims 25-27 are also believed allowable for at least the same reasons as claim 24.

CONCLUSION

In view of the forgoing remarks, it is respectfully submitted that this case is now in condition for allowance and such action is respectfully requested. If any points remain at issue that the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

No fee is believed due with this Amendment, however, should such a fee be required please charge Deposit Account 50-0510 the required fee. Should any extensions of time be required, please consider this a petition thereof and charge Deposit Account 50-0510 the required fee.

Respectfully submitted,

Dated: July 7, 2008

/ido tuchman/

Ido Tuchman, Reg. No. 45,924
Law Office of Ido Tuchman
82-70 Beverly Road
Kew Gardens, NY 11415
Telephone (718) 544-1110
Facsimile (866) 607-8538